

User manual

IPL Model No.: E-angel 301



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Chapter 1 Introduction of E-angel 301

I Treatment theory

Intense Pulsed Light (IPL), most commonly employed by medical practitioners and estheticians working under the guidance of a physician, is a method of hair removal from the body. It involves the use of a specially constructed xenon flash lamp and focusing optics.

The Intense Pulsed Light hair removal process has become very popular due to its cheaper and faster procedure compared to laser hair removal. The comparison of effectiveness between Intense Pulsed Light and Laser Epilation is debated by scientists, equipment manufacturers and practitioners, but results are generally accepted to be roughly equivalent. IPL is generally advertised as "permanent hair reduction" as opposed to "permanent hair removal" (these phrases are misnomers when applied to laser or IPL hair removal). It is also used for the treatment of the skin in a process known as photorejuvenation.

The focused, broad-spectrum light is applied to the surface of the skin by way of either a hand-held wand or an articulated arm. This light travels through the skin until it strikes the hair shafts or the bulb (root) of the hair. The bulb is usually where the highest concentration of melanin is located, as opposed to the rest of the hair shaft. As the light is converted to heat energy, the bulb and most of the hair shaft are instantly vaporized. The intense heat radiated by the hair also destroys the hair-producing papilla or the entire hair follicle. It is also claimed that direct light-heat conversion occurs directly in the darker colored capillaries that bring nourishing blood to the follicle.

IPL technology is also employed in the treatment of medical disorders of the skin including:

- Sun damage induced dyspigmentation and vascular changes
- Poikiloderma of Civatte
- Acne Rosacea
- Broken capillaries/telangiectases
- Vascular and pigmented birth marks

In terms of rosacea, IPL offers one of the few effective treatments to relieve the facial redness associated with the disorder. Such treatment is best administered by a specialist dermatologist. This new technology incorporates 'dual mode filtering' and other important advances which result in safer and more effective treatment than older systems designed for hair removal.

II Functions of the E-angel301

- 1) Hair removal (both thick black hair and thin light hair)
(640nm~1200nm filter)
- 2) Pigmentation removal **(530nm~1200nm filter)**
- 3) Vascular therapy **(480nm~1200nm filter)**
- 4) Skin rejuvenation **(590nm~1200nm filter)**
- 5) Breast enhancing **(690nm~1200nm filter)**

III Taboos (who are not suitable to use this machine?)

- a) Pregnant
- b) Isolation in the sun
- c) Sensitive to light or medicine, or are taking medicine that sensitive to light
- d) Using vitamin within 6 months
- e) Not representative naevi or malignant pathological changes in the treatment area.
- f) Pacemaker or quiver dispelling device user
- g) Herpes or trauma
- h) Pimple record
- i) People who accept Hirudin etc. treatment (should stop using it before 2 weeks).
- j) Severe diabetes patient, high blood pressure sufferer, and epileptic

Chapter 2 Safety notices of E-angel 301

I IPL safety notices



Any people who are eligible in using and maintaining EANGEL301 can safely use this machine .Any operators and his/her assistants must know well the following safe notices and make sure both the operator and the customers are safe during the treatments .

- a) The machine will start inspection automatically after it is on.
- b) Adopt the close filter /crystal of transferring light, the IPL can only emit from the front face
- c) Independent electrical circuit, it will automatically stop working if the energy is too high.
- d) The emergency switch is convenient when you are in emergency
- e) The key switch can protect it from stolen because they can't start the machine without certain key



II

Any intensive light without correct using will hurt people. It can work out high voltage when working; we suggest anybody who operates this machine should read this safety notices before using it.

For Operator: it's possible to touch the intensive light. So make sure you wear the 3 grade glasses.

For customer: it is better if the operator is trained eligible and arrange a proper treatment room for the customer. It is even better if the customer knows the treatment theory and cooperates with the operator during the treatment. He/she must make sure wear the professional protective eye patch which protects his/her eyes from burning.

About the treatment room: there must be clear mark which shows "using intensive light NOW!"

1) 【MAIN WARNING】

Please make sure you will carefully read the following warning tips:

- a) We need to warn you that it has dangerous high voltage .Anybody except technicians that authorized by our company can repair this machine. Especially the inside of device e.g.: electrical source, cooling system, optic organs and treatment head. Etc.
- b) Make sure the voltage of this machine is same with yours, (110V or 220V)
- c) It will hurt both you and the machine if you repair it when it is still working, we strongly warn you that you must turn off the machine and pull out the electricity line and then start repairing it.
- d) Keep the filter and probe clean. MAKE SURE there is no cooling gel inside the filter or probe.
- e) Stop using the machine when the headpiece is leaking water, if it is already on, pls close it immediately.

2) 【WARNING ON INTENSIVE LIGHT】

- a) The intensive light is possible to hurt your eyes or cause fire and burnt .so we suggest you wear the glasses.
- b) It will hurt the customer if you use too high energy or make too many shots in one certain treatment area
- c) Do not directly see the intensive light or laser light even if you wear the protective glasses and eye patch.
- d) Do not point the treatment head to the air. Point it to the treatment area when using and hang it on the bracket when you don't use it.

III Safety of the electricity and equipment

- a) Keep all the panels and cover board closed.
- b) There is high voltage inside the machine even when it is off. So it is better not open the equipment if there is no need.
- c) Please make sure the electricity is off if you want to repair the machine
- d) EANGEL301 is about20kg in net weight .it might hurt people if you move it in not proper ways.
So pls make sure you move it slowly and carefully
- e) Safe power line designed with 3 cores.

1)



- a) The temperature of objects will rise after absorbing light energy, so please take actions to reduce the flammable risk on treatment areas and surrounding areas.
- b) Do not use alcohol, acetone or other flammable things on skin before treatment. You can just wash the skin with water or sometimes a little soap.
- c) If you use alcohol to disinfect the treatment head or any other parts, please wait till dry and then start the machine, otherwise it is dangerous.

2) 【SYSTEM SAFETY SETTINGS】

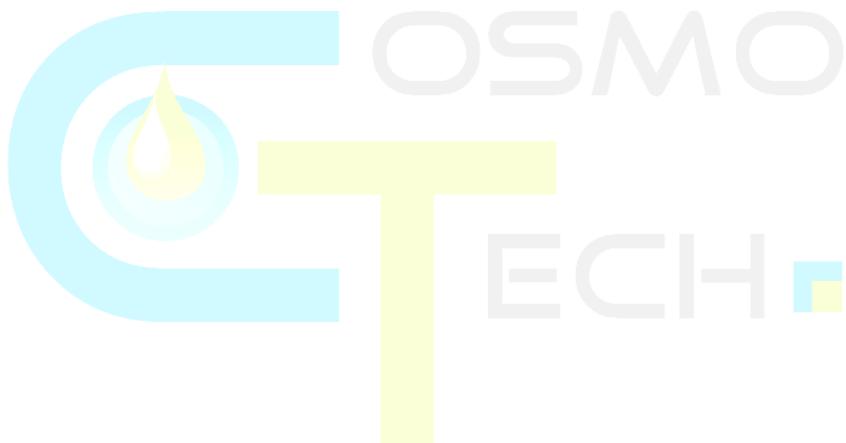
- a) Everybody in the operation room must know where the safety sets are and how to use them
- b) Anybody who doesn't have our key is not able to start the machine.
- c) There is a red indicator light which will be on if you start the machine.
- d) Emergency button: the red switch is used to switch off power when you come to any emergency. Just press it and the machine will stop working .next time you use the machine, you need to turn this emergency button on.

3) 【AUTOMATICAL INSPECTION】

It will start inspecting itself automatically when you start the machine. You need to turn on and turn off the machine repeatedly for 3 times and then start using it.

4) 【LEVEL OF EQUIPMENT】

- a) Level of motor protection: 1 CLASS, BF CLASS
- b) Anti-corrosive liquid: general
- c) Not allowed to use this machine in room that exists flammable anesthetic and nitrous oxide.
- d) Operation manner: continuous operation



Chapter 3 Installation of E-angel301

I 【Components of the device】

◆ Main machine

Power supply system
Cooling system
Joint part system

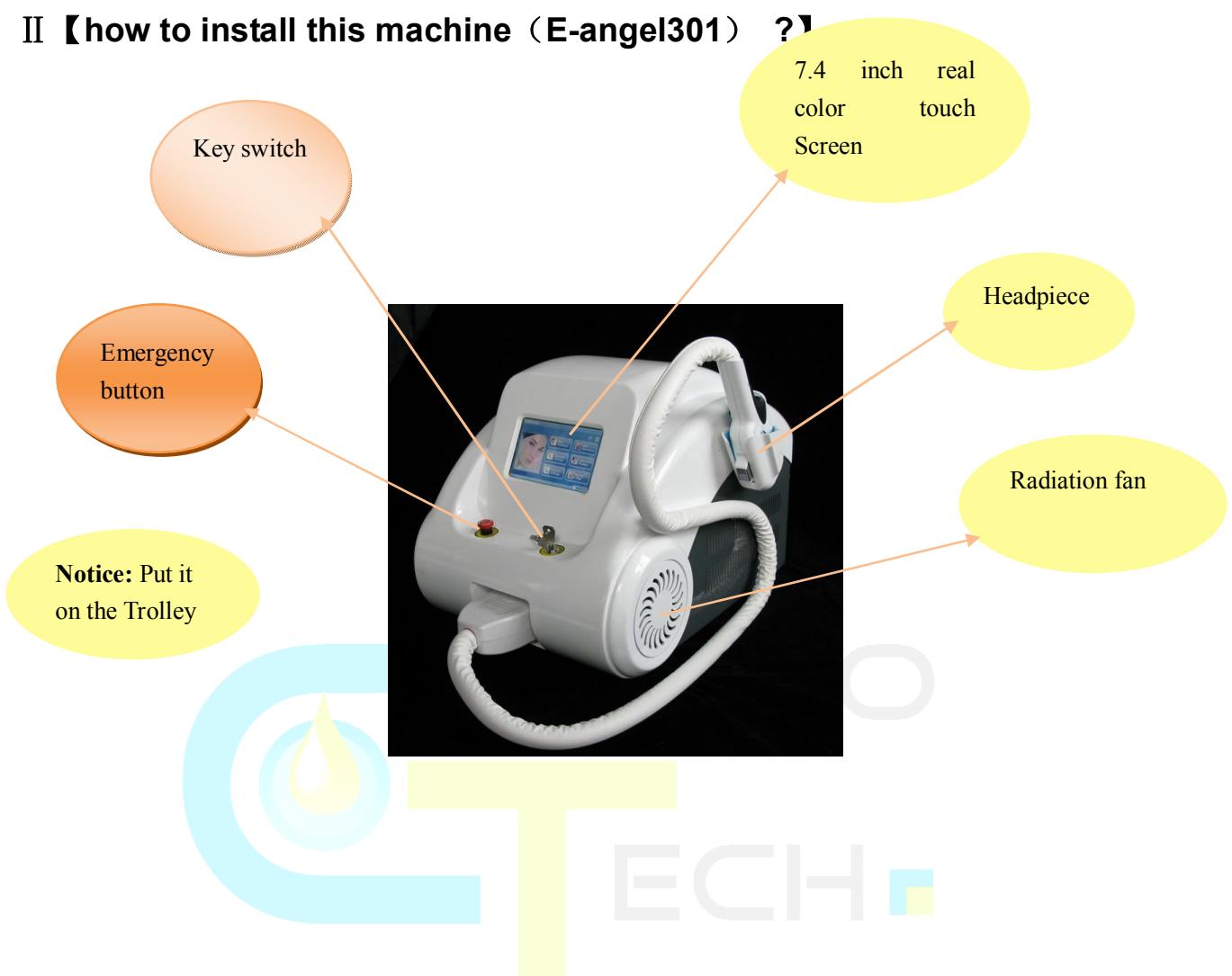
◆ Handle

Probe
Filters

◆ Assembly parts

Key
Cleaner
Power line
Water pipe
Water funnel
Professional protective glasses
Professional protective eye patch

II 【how to install this machine (E-angel301) ?】



a) Open the package; carefully place the machine on level ground. Make sure the treatment room is clean and it is about 22~28°C and humidity not more than 20%.



b) Connect the headpiece with the machine



c) At the same time, please carefully place the probe on the bracket .show as below





d) Input **distilled water or pure water**

Screw off the caps of water inlet and spilt water

Connect the water tube and water funnel well

Insert the inlet to input water

Stop inputting water when there's water spilt from the spilt water hole, (usually you might need 2 liters' of pure water or distilled water.)

After that, you don't need to screw those 2 caps on .because it needs air to cycle normally. You can screw them on when you finish using this machine.

pls change the water each 2 months

e) Please connect the electricity power line with the machine.



f) Please insert the key on the machine



Turn it, then the water cycles inside and the interface shows like this



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Turn off the machine

pls repeat this for another 2 times

PS: this is to make sure water cycles normally, only when it cycles normally can the machine work in stable state. You will hear the sound of water flow. 3-5 minutes later, the probe runs cold.



If the water doesn't cycle or the probe does not cold, there might be air in the pump



Grip the white hose vertically and slack, then turn on the device again, this will exhaust the air to the water tank, then the air will exhaust from the hole for spilt water and water inlet



480nm~1200nm: vascular lesions therapy

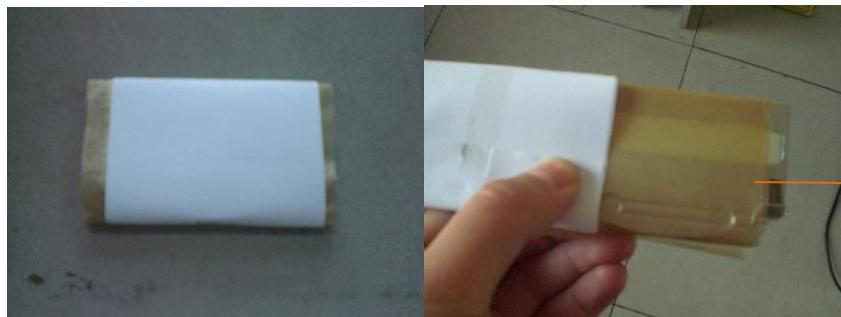
530nm~1200nm: pigmentation, wrinkle removal

590nm~1200nm: skin rejuvenation

640nm~1200nm: hair removal

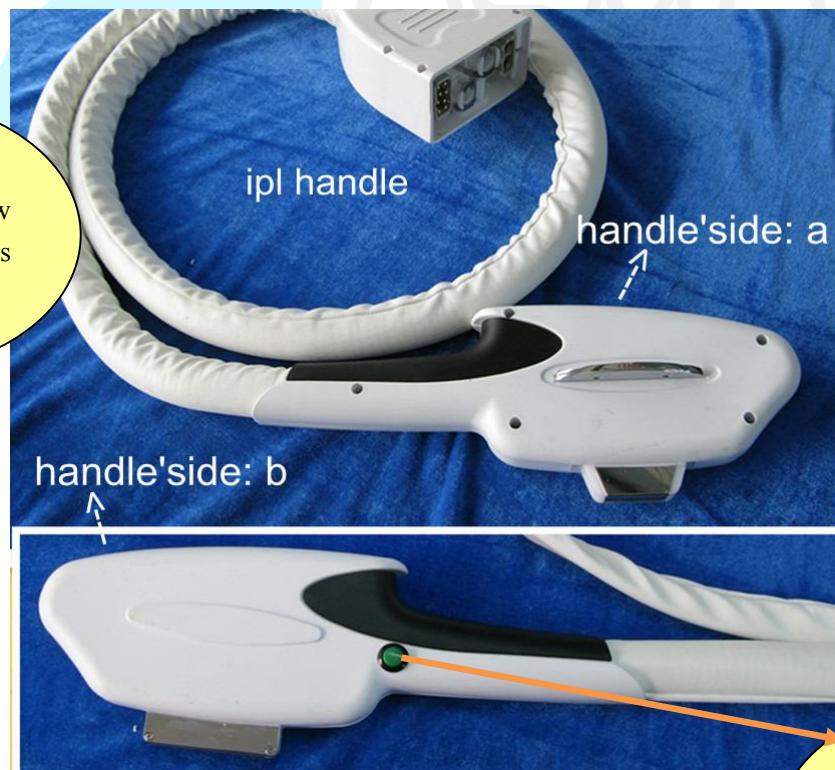
690nm~1200nm: breast lift up

g) How to insert the filter?



Please make sure
the filter is clean

Use even force to insert it into the slot.

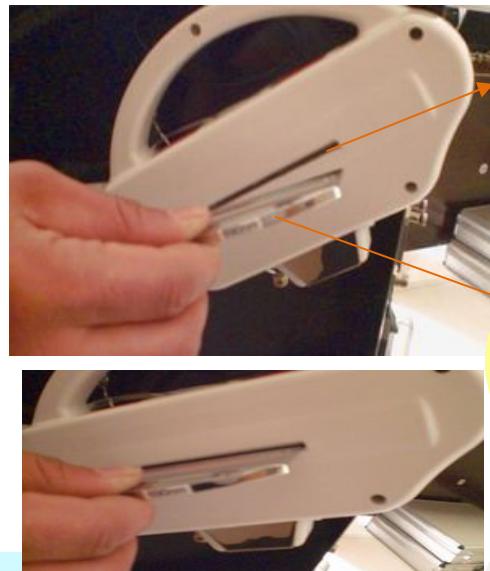


There is a counter
which shows how
many shots has
been used

handle'side: a
1

You can press either of
this button to let the
shot out. Or use the
pedal.

**The above is the Newest
Handle design, very elegant**



Bevel on top, right angle below

The design of filter is same as the slot, bevel on top, right angle below. It's possible to insert the filter for a right match.

Chapter 4 How to use E-angel 301

I 【Clinic operation】

Before the treatment

- Classification of skin: it's safe and effective to the white, brown or yellow skin.
- Sign the agreement
- Clean the skin to make sure there is no perfume and cosmetics left.
- Use digital camera to keep an original picture. Take photo from different angles.
- If necessary, use external anesthetic one hour before the treatment;
- Before the treatment, please make sure enough water and water circulation inside the device, and wait till the probe gets cool, then start to do the treatments



If the probe is not cold or it even becomes hot, please stop using this machine and turn to us for help. Otherwise it will hurt people and damage the machine.

During the treatment

- Patients wear protective eye patch, operator wear the professional glasses, respirator and medical gloves.
- Spread approximate 3mm cooling gel in front the ears and below the chin. Try to test it with 2-3 spots at the parameters that are set already. After 3-5 minutes, observe the skin, to make sure that the customer is fit to these parameters.

- c. As to protruding parts in the bone structure (such as forehead, mandible and cheekbone). pls adjust different RF energy for different customers.
- d. During treatment, vertically slide the bipolar probe on skin with level force, and observe whether it's touched well or not. Overlapped shoot offers good effects.
- e. Continuously press either of the 2 buttons on the headpiece or step the foot pedal make symmetrical output energy.



Please do not press the button on handle one press by one press nor step the foot pedal step by step. That will make skin gets different energies which will surely hurt the customer.

- f. If you want to slide to another far away parts of skin, pls release the button or the foot pedal first. This can avoid customers hurt by sudden shock.



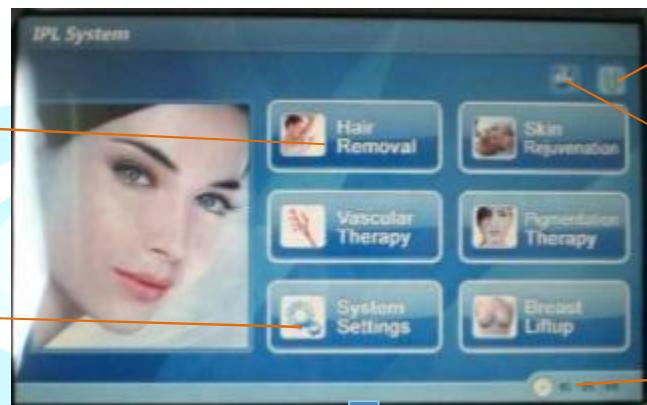
c)

- a. Before and after the treatment, please Avoid sunlight and burn, and you need to use some UV power protector (cream) (SPF>30) to avoid direct sunshine.
- b. One week before and after the treatment. Please do Avoid chemical or mechanical stimulation
- c. 2 weeks before and after the treatment. Do not take filled things or injection treatment
- d. 3 days after treatment, Avoid direct or indirect heat stimulation to the treatment area, especially to those of high pigment deposit.
- e. If the customer had laser skin care treatment before this treatment, please wait for more than 3 weeks ,then the customer can accept the treatment
- f. After the treatment, patients are not allowed to eat the foods of dark color or very spicy food within two weeks, such as the sauce, coke, sea foods, capsicum etc.
- g. It's not allowed that insulation in the sun before and after the treatment
- h. It's not allowed to use any cosmetics after the treatment, it is advised to use natural moisturize products.
- i. Please cool the bad reaction area (like tumescence and causalgia) after the treatment with small pieces of ice.

II 【Parameters of each treatment】



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Five different Treatments

System Settings

Working Temperature

Water Circulation

Clock



1 for black skin

2 for other skin

3 for white skin

Treatment Counter

Working Temperature

Parameter Setting

Energy Setting



Actually we have set these parameters for you already, so that really saves time for you, you don't need to set those parameters each time you have customers. You just adjust the IPL and RF energy and the cooling mode and you can start the treatment

Clean the customer's skin with water, shave the unwanted hair on the treatment area or shear the unwanted hair till 1mm to the hair root.

 Cooling gel is used to let customers' skin feel cold and better lead light into deep layer of skin. Spread the cooling gel on the treatment area, about 3mm thickness



During the process of parameter adjustment or parameter settings, don't touch "Ready.", you can press it when you finished setting the parameters.

Please screw on the 2 caps of water inlet and spilt water, wait for 20 minutes, then scrape the cooling gel

a) hair removal treatment (640nm~1200nm filter)



with hair removal treatment

Ps: you don't need to cut hair before the treatment, as that is for hair removal treatment only

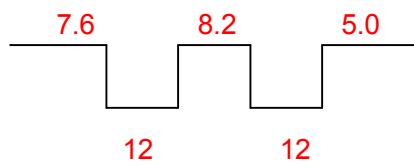
- 3-5 treatments as one cycle.
- Every 3-4 weeks for one treatment.

 Because human metabolism cycle is 3-4 weeks, some decomposed pigment cells of hair follicle are phagocytosed by the lymphocyte, and expel from the body along with metabolism .

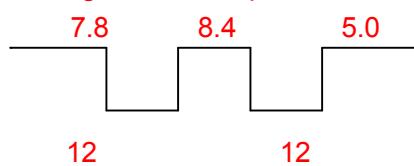
● Feelings in the treatment: some pain feelings like needle pricking. 3-8 hours after the treatment, a little inflamed feelings on skin. Lightly tweezer the hair root, naturally shed and no pain, which means the best effect.

- Parameters:

Discharge interval: 4 pulse #:6

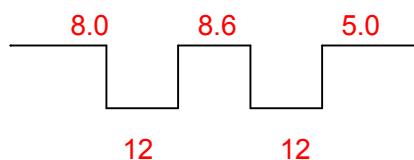


Discharge interval: 4 pulse #: 6



Dear my friend, You should better not adjust those parameters .as we have already set it for you .but if you do change those parameters, the energy and results will not in our charge .it might hurt people or things like that. So we suggest you not change those parameters most of the time.

Discharge interval: 4 pulse #:6



b) skin rejuvenation treatment (530nm~1200nm filter)



with hair removal treatment

Ps: you don't need to cut hair before the treatment, as that is for hair removal treatment only

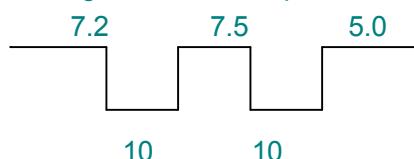
- 1-3 or 3-6 treatments as one cycle.
- Every 3-4 weeks for one treatment.



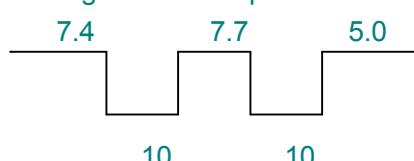
Because the human metabolism cycle is 3-4 weeks, the stimulated collagen fiber tissues and flexibility fiber tissues will be steady along with the metabolism.

- cooling gel: customer will feel less painful and the cooling gel can better lead light to skin.
- Parameters:

Discharge interval: 3 pulse #: 4

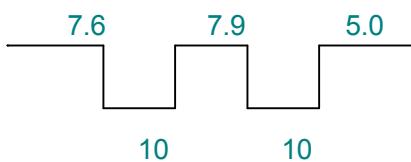


Discharge interval: 3 pulse #: 4



Dear my friend, You should better not adjust those parameters .as we have already set it for you .but if you do change those parameters, the energy and results will not in our charge .it might hurt people or things like that. So we suggest you not change those parameters most of the time.

Discharge interval: 3 pulse #: 4



c) vascular lesions treatment (480nm~1200nm filter)

similar with hair removal treatment

Ps: you don't need to cut hair before the treatment, as that is for hair removal treatment only

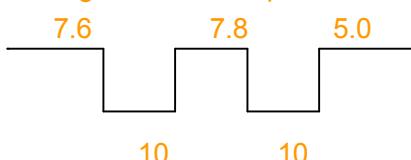
- 1-3 or 3-6 treatments as one cycle.
- Every 3-4 weeks for one treatment.



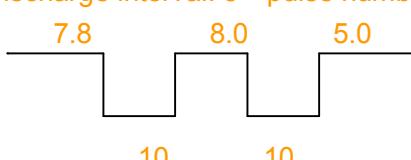
Because the human metabolism cycle is 3-4 weeks, the stimulated capillary vessel tissues will be shrinking and steady along with the metabolism.

- Feelings in the treatment: Some pain feelings like needle pricking. A little inflamed feelings on skin after the treatment.
- cooling gel: customer will feel less painful and the cooling gel can better lead light to skin.
- Parameters:

Discharge interval :3 pulse number:4

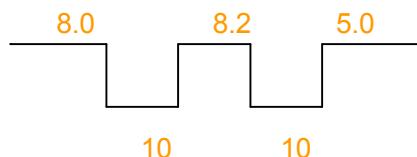


Discharge interval: 3 pulse number 4



Dear my friend, You should better not adjust those parameters .as we have already set it for you .but if you do change those parameters, the energy and results will not in our charge .it might hurt people or things like that. So we suggest you not change those parameters most of the time.

Discharge interval :3 pulse number:4



④ pigment & wrinkle removal treatment (590nm~1200nm filter)

similar with hair removal treatment

Ps: you don't need to cut hair before the treatment, as that is for hair removal treatment only

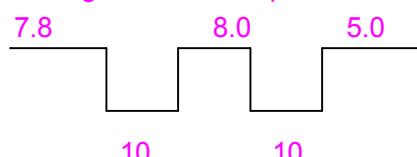
- 1-3 or 3-6 treatments as one cycle.
- Every 3-4 weeks for one treatment.



Because the human metabolism cycle is 3-4 weeks, some decomposed pigment cells are phagocytosed by the lymphocyte, and expel from the body along with the metabolism.

- Feelings in the treatment: some pain feelings like needle pricking. 3-30 minutes after the treatment, pigment will be darker. Pigment scab will shed 3-7 days later.
- cooling gel: customer will feel less painful and the cooling gel can better lead light to skin.
- Parameters:

Discharge interval: 4 pulse number: 5

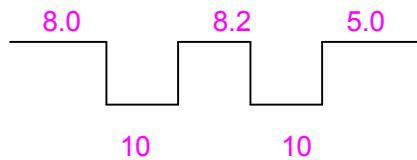


Discharge interval: 4 pulse number: 5

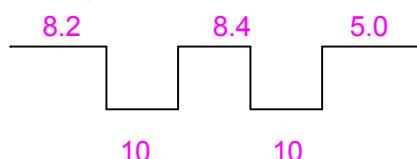
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Dear my friend, You should better not adjust those parameters .as we have already set it for you .but if you do change those parameters, the energy and results will not in our charge .it might hurt people or things like that. So we suggest you not change those parameters most of the time.



Discharge interval :4 pulse number:5



e) breast lift up treatment (690nm~1200nm filter)

with hair removal treatment

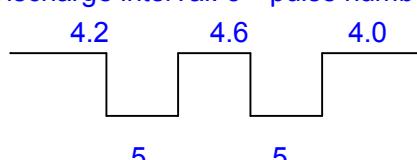
Ps: you don't need to cut hair before the treatment, as that is for hair removal treatment only

- 1-3 or 3-6 treatments as one cycle.
- Every 1-2 weeks for one treatment.

• The treatment theory is that stimulating the renewal of the mammary gland cells, and enhancing the ligament tissue, to plump the breast naturally. Because the human metabolism cycle is 3-4 weeks, the stimulated capillary vessel tissues will be shrinking and steady along with the metabolism.

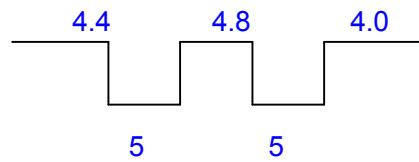
- Feelings in the treatment: Swollen feelings inside breast.
- Parameters:

Discharge interval: 3 pulse number:3

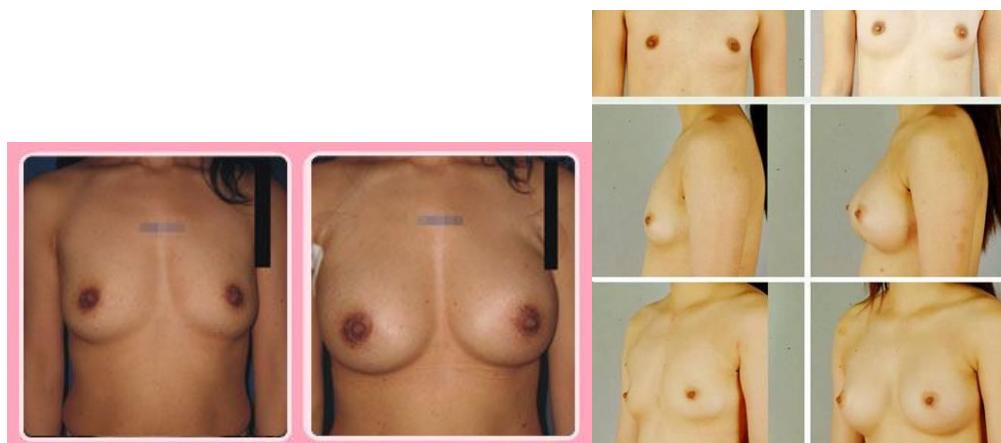
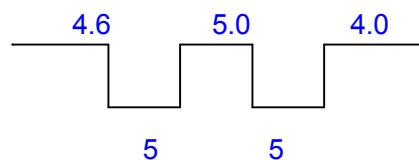


Discharge interval: 3 pulse number: 3

Dear my friend, You should better not adjust those parameters .as we have already set it for you .but if you do change those parameters, the energy and results will not in our charge .it might hurt people or things like that. So we suggest you not change those parameters



Discharge interval: 3 pulse number:3



Chapter 5 Simple Maintenance of E-angel 301

I 【precautions】

- 1) No stress on the touch-LCD, prevent it from breaking up
- 2) Keep the filters clean. It's not allowed to clean the filters with ethanol
- 3) The handle is fragile, please do be careful when you pick up the headpiece..
- 4) Change water each 3~6 months. make sure water circulate normally before you start the treatment

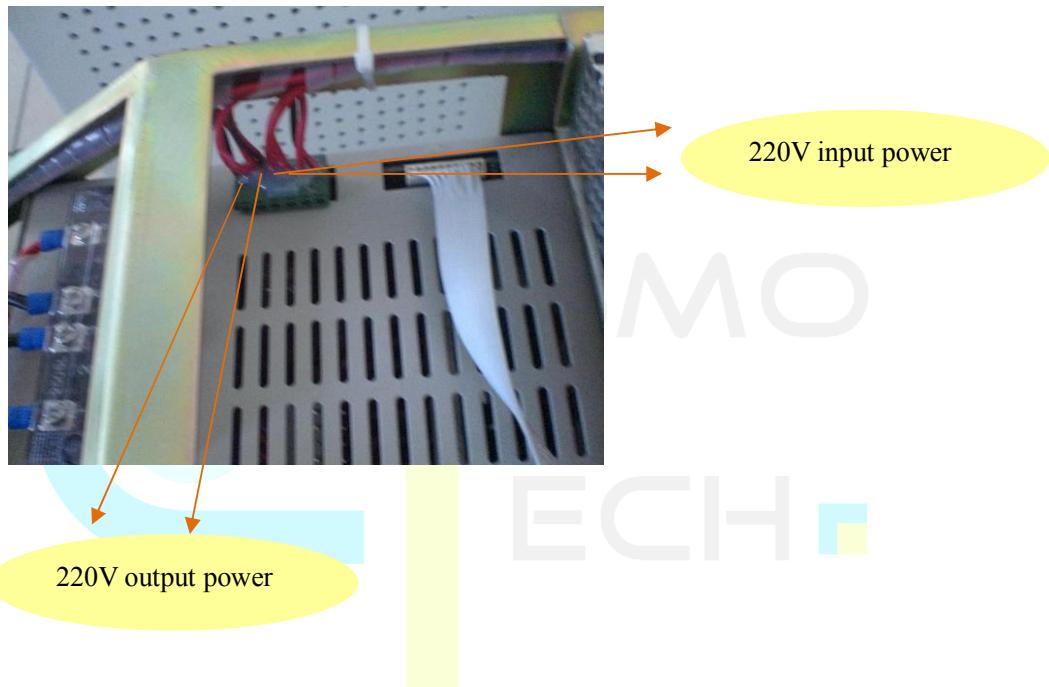
II 【Analysis On Simple Malfunction】

1. No power supplied



Please don't worry. You can DO AS following the sequence below to find out what the problem is.

- ① Check up whether there is power supplied from electrical source.
- ② Check up whether the power line is connected well.
- ③ Check up if the emergency switch is on
- ④ Check up if the air switch is on
- ⑤ Check up if the key switch is on
- ⑥ Check up the fuse, which could be pulled out at the bottom of hole for power plug.
- ⑦ Check up if the inside electricity line is connected well



2. The probe is not cold



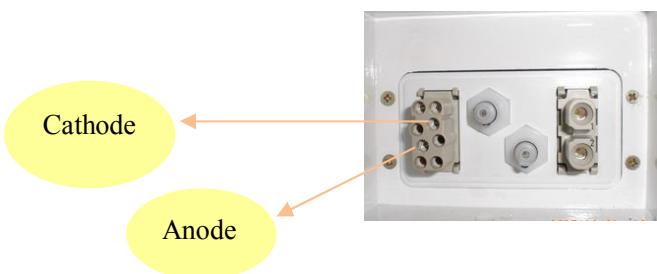
- ① Check up whether there's water in water tank and make sure water circulates normally
- ② Check up the direct power supply switch, whether there's 12V direct current output

Reason of Non-Refrigeration:

- a. Check up whether the Peltier is well or not:

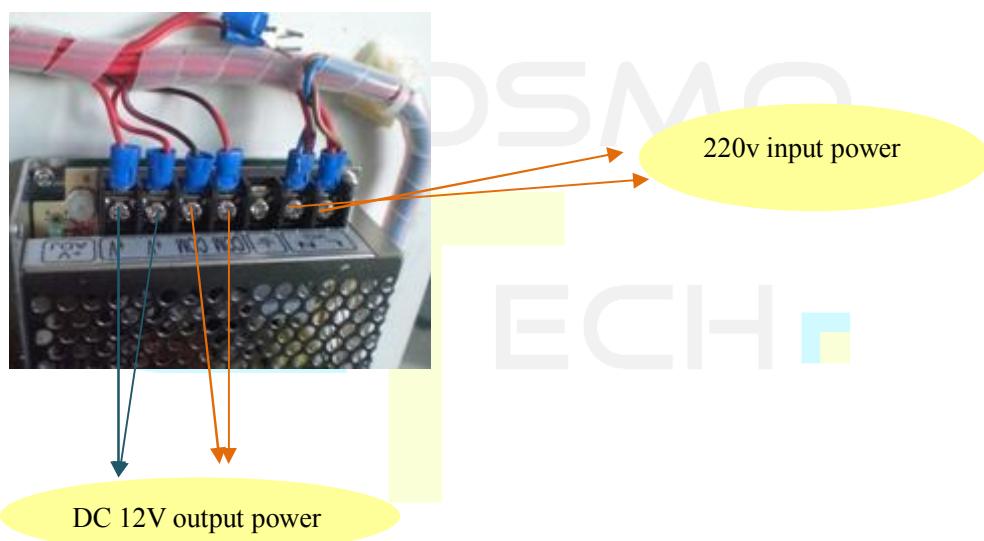


b. After turning on the machine, you should test the above Anode and Cathode with multimeter. 12V/ DC output means the electrical source is well



Please check up whether this two electrode is well or not, which relate to the Peltier.

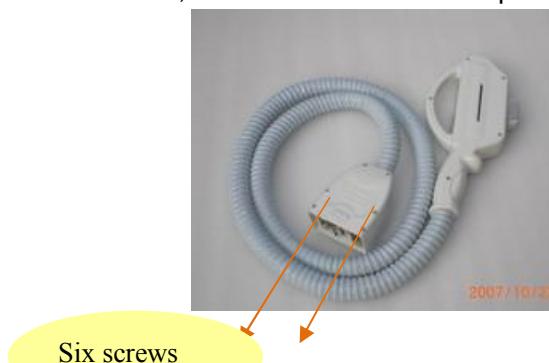
c. 😊 If above two electrodes don't have DC12V output, please disconnect the panel, show as follows:



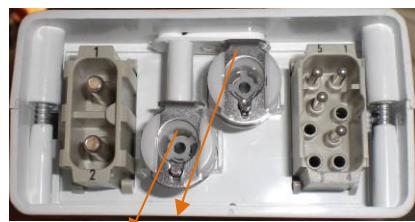
If there is no output, means that the direct current electrical source part is broken.

d. Check up whether the water circulation is good: to open the panel of one end of the handle, as follow:

◆ Screw off these 6 screws, and then disconnect the panel



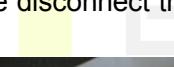
◆ Disconnect the water plug with the connected water pipe, then plug these two plugs into the joint on the back panel; blow air inside the water plug with mouth, see whether it is ventilated. Or directly turn on the device, see whether there is spilt water from these two plugs. (Remarks: for the last test method, we suggest that take a basin or other vessel load the spilt water.)

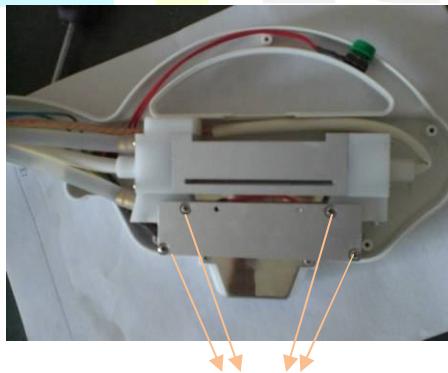


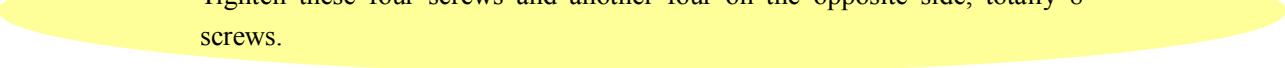
3.  The xenon lamp is not on:
 a. The lamp is exhausted; the lamp broken down.
 b. Poor contact (anode and cathode line)
 c. Simmer board broken down

5.  **Only LCD screen displays, but can't enter into the treatment menu.**
 Touch LCD screen broken down

6. **Water Leak from the probe**

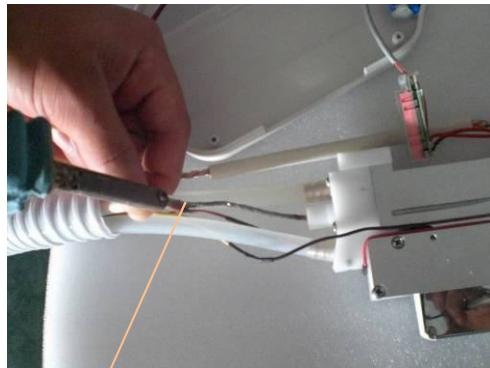
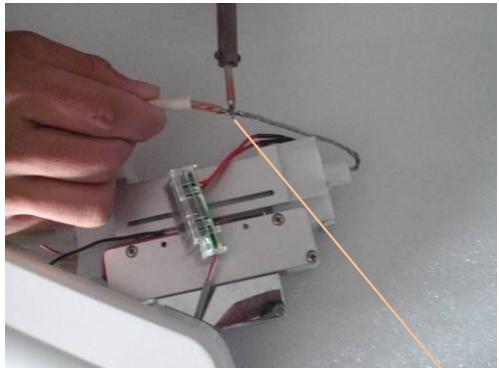
a. The xenon lamp broken down
 b. Poor connection inside. Please disconnect the panel of the treatment head, and tighten the screws, show  as follows



 Tighten these four screws and another four on the opposite side, totally 8 screws.

7. **Replace the xenon lamp**

a. Disconnect the panel of handle.
 b. Cut down the wire connection of lamp---the insulating tape, protecting electricity leakage



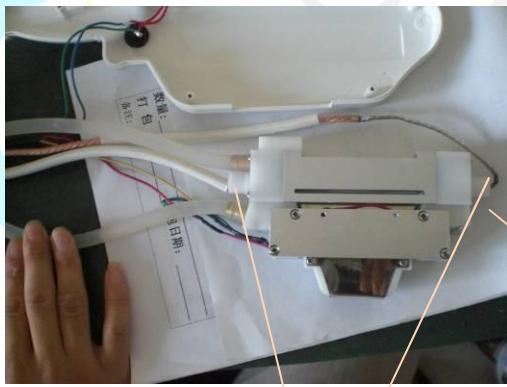
Anode

Catnode

Two wire ends of the lamp. Exactly speaking, red wire of lamp connects to red wire of handle; white wire of lamp connects to white wire of handle. All wire connections

c. Weld down the wires.

d. Screw off these two screw caps (show as follows)



Draw out the lamp from this side.

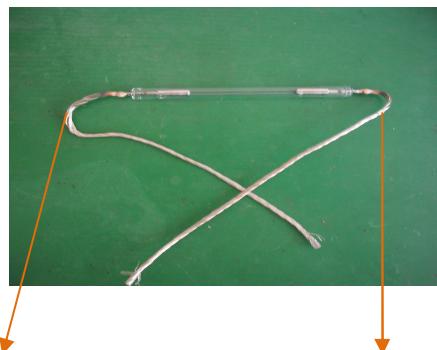
Screw off these two caps carefully.

e. Insert the new lamp

Caution:

1. Wrap the wires of lamp by the insulating tape or tube, before replacement. And do as the above steps carefully or easy to break the lamp down.
2. Wire connection of lamp: red wire of lamp connects to red wire inside handle; white wire of lamp connects to white wire inside handle. All wire connections cannot be mixed.

f. Take out the xenon lamp, show as follows:



The lamp wire is wrapped well with the insulating pipe, make sure good insulation

Red end is Anode, match up to the wire inside the handle.

d. Connect the new xenon lamp

Weld the lamp wire with the wire inside the handle, in accordance with the connection method of red wire on lamp to red wire inside the handle.

Chapter 6 Contact us

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